

## **AMENDMENT**

### **LISTING OF CLAIMS:**

The following listing supplants all prior listings of the claims.

1. to 12. (Canceled)
13. (Currently Amended) A method of simulating a process in which ore, in a heap, is microbiologically leached, the method including the steps of microbiologically leaching material, representative of the ore, in a housing defining an enclosed, confined volume, monitoring the temperature of the material, inside the volume, at each of a plurality of locations to assess the leaching activity at each location and, in response to the monitored temperatures, controlling separately controlling the operation of each of a plurality of heat sources which are positioned at predetermined locations within the confined volume to control heat loss from the confined volume effectively to zero.
14. (Canceled)
15. (Canceled)
16. (Original) A method according to claim 13 which includes the step of establishing a controlled temperature gradient inside the material.
17. (Previously Presented) A method according to claim 16 wherein the temperature gradient is established at least by controlling the supply or composition of gas or liquid to the confined volume.
18. (Original) A method according to claim 13 which includes the step of supplying an acidic liquid medium, on a controlled basis, to an upper end of the confined volume to simulate the act of irrigating an upper surface of a heap which is leached on a commercial basis.

19. (Original) A method according to claim 13 which includes the step of supplying gas on a controlled basis to a lower end of the confined volume.
20. (Original) A method according to claim 19 wherein the gas includes oxygen and carbon dioxide.
21. (Original) A method according to claim 13 which includes the step of manipulating the position of at least one temperature zone in the material in the confined volume.
22. (Original) A method according to claim 13 which includes the step of modifying the temperature of a given zone in the material.
23. (Currently Amended) A method of simulating a heap-leaching process which includes the steps of microbiologically leaching ore in a housing defining an enclosed confined volume, controlling monitoring the temperature of the ore inside the volume, at each of a plurality of locations; and separately controlling the operation of each of a plurality of heat sources that are positioned at predetermined locations relative to the volume, in response to the respective monitored temperatures to control heat loss from the confined volume effectively to zero, and varying process parameters within the confined volume.
24. (Original) A method according to claim 23 wherein the process parameters are varied to control at least one of the following: the temperature of at least one relatively high temperature zone in the confined volume; and the position of at least one relatively high temperature zone in the confined volume.
25. (Previously Presented) A method of simulating a process in which ore, in a heap, is microbiologically leached, comprising: microbiologically leaching material, representative of the ore, in a housing that defines an enclosed, confined volume; monitoring the temperature of the material, inside the volume, at each of a plurality of

locations; and, separately controlling the operation of each of a plurality of heat sources that are positioned at predetermined locations relative to the volume, in response to the respective monitored temperatures to control heat loss from the confined volume effectively to zero.